4WD-FFB

MEMORANDUM

SUBJ: Evaluation of *Keesler Air Force Base*'s status under the RCRIS Corrective Action Environmental Indicator Event Codes (CA725 and CA750)
EPA I.D. Number: *MS2570024164*

FROM: *Robert H. Pope*

THRU: *Earl Bozeman, Chief*
DoD Remedial Section

TO: *Jon D. Johnston, Chief*
Federal Facilities Branch

I. PURPOSE OF MEMO

This memo is written to formalize an evaluation of *Keesler Air Force Base*'s status in relation to the following corrective action event codes defined in the Resource Conservation and Recovery Information System (RCRIS):

1) Human Exposures Controlled Determination (CA725),

2) Groundwater Releases Controlled Determination (CA750).

Concurrence by the *Federal Facilities* Branch Chief is required prior to entering these event codes into RCRIS. Your concurrence with the interpretations provided in the following paragraphs and the subsequent recommendations is satisfied by dating and signing above. See Memo Attachment 1 for more specific information of the RCRIS definitions for CA725 and CA750.

II. HISTORY OF ENVIRONMENTAL INDICATOR EVALUATIONS AT THE FACILITY AND REFERENCE DOCUMENTS

This particular evaluation is the *first* evaluation performed by EPA for *Keesler Air Force Base*. The evaluation, and

associated interpretations and conclusions on contamination, exposures and contaminant migration at the facility, is based on information obtained from the following documents: *May 1998, Draft Final RCRA Facility Investigation, Group 1 Sites; May 1997, Statement of Basis and No Further Response Action Planned Decision Document IRP Group 2 Sites*.

III. FACILITY SUMMARY

Keesler AFB is located within the city limits of Biloxi, MS on 1671 contiguous acres. The Base is bordered by the Back Bay of Biloxi on the North and by residential areas to the East, West, and South. The Mississippi Sound is located .5 miles south of the Base. The Base has been active since 1941 and has served as an Air Force training facility for aircraft mechanics. Currently, the base serves as a training facility for electronics, communications, and personnel. In addition, a Weather Reconnaissance Wing and an Airlift Squadron operate at Keesler AFB. Minor maintenance activities are associated with the upkeep of the base and the Air operations which generate various wastes. These include solvents, oils, lubricants, fuels, metals contaminated sludge and waste water and pesticides.

IV. CONCLUSION FOR CA725:

A decision on human exposures to contamination cannot be made because there is insufficient information on media quality at the entire facility.

RECOMMENDATION: CA725 IN: More information needed.

As more fully explained in Memo Attachment 2, because there is not enough relevant information available to make a determination as to whether human exposures are controlled, it is recommended that CA725 IN be entered into RCRIS.

V. CONCLUSION FOR CA750:

There is not enough information for a decision to be made as to whether groundwater releases are controlled.

RECOMMENDATION: CA750 IN: More information needed.

VI. SUMMARY OF FOLLOW-UP ACTIONS

Keesler AFB submitted a Draft Final RFI in June 1998. Once the RFI has been fully reviewed and all data gaps identified, EPA will instruct Keesler AFB to complete the necessary investigations. In addition, Keesler AFB has initiated an Interim Measure at SWMU 9 to address possible soil contamination and to prevent any future surface water and sediment contamination in the Back Bay of Biloxi. Keesler is currently operating an in-well aeration pilot system to address soil and groundwater contamination at AOC A and is evaluating passive natural attenuation at AOC A and SWMU 66. Keesler has proposed a soil excavation through a Corrective Measures Study at SWMU 25 to address pesticide contamination. In addition, several SWMUs and AOCs are currently maintained with certain institutional controls to eliminate human exposures. Keesler AFB, the USEPA, and MDEQ are implementing permanent Land Use Controls through the use of the RCRA Permit on various SWMUs and AOCs as the sites are identified and fully investigated and any contamination is characterized and addressed.

cc: Narindar Kumar, Chief
RCRA Programs Branch

David Peacock
RCRA Branch
MDEQ

Attachments

MEMO ATTACHMENT 1

A. HUMAN EXPOSURES CONTROLLED DETERMINATION (CA725)

There are five (5) national status codes under CA725. These status codes are:

1) YE Yes, applicable as of this date [i.e., human exposures are controlled as of this date].

2) NA Previous determination no longer applicable as of this date.

3) NC No control measures necessary.

4) NO Facility does not meet definition [i.e., human exposures are not controlled as of this date].

5) IN More information needed.

The first three (3) status codes listed above were defined in January 1995 Data Element Dictionary for RCRIS. The last two (2) status codes were defined in June 1997 Data Element Dictionary.

Note that CA725 is designed to measure human exposures over the entire facility (i.e., the code does not track SWMU specific actions or success). Every area at the facility must meet the definition before a YE or NC status code can be entered for CA725. The NO status code should be entered if there are current unacceptable risks to humans due to releases of hazardous wastes or hazardous constituents from any SWMU(s) or AOC(s). The IN status code is designed to cover those cases where insufficient information is available to make an informed decision on whether or not human exposures are controlled. If an evaluation determines that there are <u>both</u> unacceptable and uncontrolled current risks to humans at the facility (NO) along with insufficient information on contamination or exposures at the facility (IN), then the priority for the EI recommendation is the NO status code.

In Region 4's opinion, the previous relevance of NA as a meaningful status code is eliminated by the June 1997 Data Element Dictionary's inclusion of NO and IN to the existing YE and NC status codes. In other words, YE, NC, NO and IN cover all

of the scenarios possible in an evaluation or reevaluation of a facility for CA725. Therefore, it is Region 4's opinion that only YE, NC, NO and IN should be utilized to categorize a facility for CA725. No facility in Region 4 should carry a NA status code.

B. GROUNDWATER RELEASES CONTROLLED DETERMINATION (CA750)

There are five (5) status codes listed under CA750:

1) YE Yes, applicable as of this date [i.e., groundwater releases are controlled as of this date].

2) NA Previous determination no longer applicable as of this date.

3) NR No releases to groundwater.

4) NO Facility does not meet definition [i.e., groundwater releases are not controlled as of this date].

5) IN More information needed.

The first three (3) status codes listed above were defined in January 1995 Data Element Dictionary for RCRIS. The last two (2) status codes were defined in June 1997 Data Element Dictionary.

The status codes for CA750 are designed to measure the adequacy of actively (e.g., pump and treat) or passively (e.g., natural attenuation) controlling the physical movement of groundwater contaminated with hazardous constituents above relevant action levels. The designated boundary (e.g., the facility boundary, a line upgradient of receptors, the leading edge of the plume as defined by levels above action levels or cleanup standards, etc.) is the point where the success or failure of controlling the migration of hazardous constituents is measured for active control systems. **Every contaminated area at the facility must be evaluated and found to have the migration of contaminated groundwater controlled before a "YE" status code can be entered.**

If contaminated groundwater is not controlled in any area(s) of the facility, the NO status code should be entered. If there

is not enough information at certain areas to make an informed decision as to whether groundwater releases are controlled, then the IN status code should be entered. If an evaluation determines that there are both uncontrolled groundwater releases for certain units/areas (NO) and insufficient information at certain units/areas of groundwater contamination (IN), then the priority for the EI recommendation should be the NO status code.

In Region 4's opinion, the previous relevance of NA as a meaningful status code is eliminated by the June 1997 Data Element Dictionary's inclusion of NO and IN to the existing YE and NR status codes. In other words, YE, NR, NO and IN cover all of the scenarios possible in an evaluation or reevaluation of a facility for CA750. Therefore, it is Region 4's opinion that only YE, NR, NO and IN should be utilized to categorize a facility for CA725. No facility in Region 4 should carry a NA status code.

MEMO ATTACHMENT 2

MEDIA BY MEDIA DISCUSSION OF CONTAMINATION AND THE STATUS OF PLAUSIBLE HUMAN EXPOSURES

GROUNDWATER: A decision on human exposures to contamination cannot be made because there is insufficient information on groundwater quality at the entire facility

Information on the presence or absence of groundwater contamination is insufficient or lacking in certain areas of the facility. These areas of the facility correspond to locations where groundwater contamination could be present given near-by SWMUs, questionable facility operations, etc. Keesler AFB has recently submitted a Draft Final RFI which has possible data gaps concerning groundwater at various SWMUs and AOCs. Due to these data gaps it is not possible to fully delineate all potential groundwater contamination at the Base. Once the RFI has been reviewed and all data gaps have been addressed, more specific information will be available. In addition, it is known that there have been releases to only the surficial aquifer of fuels and fuel constituents at SWMU 66 and at AOC A. Keesler has pilot tested a Bioventing system at AOC A to address some contamination and an in-well aeration system to address contamination in both the vadose zone and the saturated zone of the surficial aquifer. Keesler AFB is also currently evaluating the efficacy of natural attenuation at SWMU 66 and AOC A. However, there is currently insufficient data to determine if natural attenuation will suffice as the final remedy for these sites. In addition, groundwater contamination may be present at other SWMUs and AOCs which have not been fully investigated. However, there is currently no indication that there have been off-site releases to groundwater.

Because of the uncertainty regarding the presence or absence of groundwater contamination at questionable areas of the facility, an opinion on plausible human exposures to groundwater contamination is not possible at this time.

SURFACE WATER: A decision on human exposures to contamination cannot be made because there is insufficient information on surface water quality at the entire facility

Information on the presence or absence of surface water contamination is insufficient or lacking at certain areas of the

facility. These areas of the facility correspond to locations where surface water contamination could be present given near-by SWMUs, facility operations or land use, etc. Possible contamination could exist in the Back Bay of Biloxi due to past operations at Keesler AFB. Until the investigation has been completed, a determination of potential contamination cannot be made.

Because of the uncertainty regarding the presence or absence of surface water at the facility, an opinion on plausible human exposures to surface water contamination is not possible at this time.

SOIL: A decision on human exposures to contamination cannot be made because there is insufficient information on soil quality at the entire facility.

Information on the presence or absence of soil contamination is insufficient or lacking in certain areas of the facility. These areas of the facility correspond to locations where soil contamination could be present given near-by SWMUs, questionable facility operations, etc. On-site soil contamination may exist at SMWUs 25, 7, and 9 and AOC A. Until the investigation has been completed, a determination of potential contamination cannot be made.

Because of the uncertainty regarding the presence or absence of soil contamination at questionable areas of the facility, an opinion on plausible human exposures to soil contamination is not possible at this time.

AIR: A decision on human exposures to air releases from SWMUs/AOCs cannot be made because there is insufficient information on air quality.

Information on the presence or absence of air contamination is insufficient or lacking in certain areas of the facility. These areas of the facility correspond to locations where air releases from soil, groundwater and/or surface water contamination could be reasonably expected to be occurring. Until the investigation has been completed, a determination of potential contamination cannot be made. However, at present there is no indication of air releases from Keesler AFB.

Because of the uncertainty regarding the presence or absence of air contamination at questionable areas of the facility, an opinion on plausible human exposures to air contamination is not possible at this time.